

**REMARKS**

Claims 1-18 are pending in the present application with Claims 1, 3, 6, 10, 12 and 15 as independent claims. In the Office Action, the Examiner rejected the Claims as follows. Claims 6 and 15 are rejected under 35 U.S.C. §102(e) as being anticipated by Mody et al. (U.S. Pub. No. 2002/0181390). Claims 1, 3, 5, 9, 10, 12, 14 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mody in view of Admitted Prior Art (APA).

Reconsideration of the application is respectfully requested.

It is gratefully acknowledged that Claims 2, 4, 7-8, 11, 13, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Regarding the rejection of independent Claims 6 and 15, Applicants respectfully submit that the Examiner is incorrect. As recited in MPEP 706.02(IV), “for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly.” At the very least, Mody does not teach “a first preamble for synchronization” and “a second preamble for channel estimation.” The Examiner states that Mody discloses “a demultiplexer for demultiplexing a received signal and outputting the demultiplexed signal as a first preamble for synchronization, a second preamble for channel estimation, and data” at paragraphs [0007], [0009-0011] and [0028-0030]. In contradistinction to the Examiner’s allegations, the cited passage of Mody teaches an apparatus that can be used to estimate channel parameters across which a data frame is transmitted in a MIMO system. In conjunction with a synchronization scheme, the parameter estimator calculates an accurate estimation of the characteristics of the channel, thereby making the MIMO systems operational. There is a stark difference between *Mody* and the present invention. The present invention as recited in the independent claims discloses “a first preamble for synchronization” and “a second preamble for channel estimation,” whereas *Mody* provides for synchronization in the time domain and the frequency domain. Therefore,

*Mody* fails to anticipate the limitation quoted above. Accordingly, *Mody* fails to anticipate Claims 6 and 15.

Regarding independent Claims 1, 3, 10 and 12, the Examiner states that *Mody* discloses “a first preamble generator for generating a first preamble for synchronization using an aperiodic sequence with an aperiodic correlation property and a second preamble generator for generating a second preamble for channel estimation using the aperiodic sequence.” After reviewing *Mody*, Applicants respectfully disagree.

More particularly, to support his rejection, the Examiner states that *Mody* (in paragraph 0007 and 0039) discloses the above recitation. The Examiner noted that “training symbols or preambles are at the beginning of data frames and are used to provide synchronization and channel parameter estimation.” However, with reference to the cited passages, *Mody* teaches a preamble comprises a number of training symbols  $N_1$  and cyclic prefixes  $G$ . (See page 5, paragraph 0051). However, Applicants could not find any reference in *Mody* to the recitation of a first preamble generator for generating a first preamble for synchronization using an aperiodic sequence with an aperiodic correlation property and a second preamble generator for generating a second preamble for channel estimation using the aperiodic sequence in Claims 1, 3, 10 and 12. The APA does not cure the deficiencies of *Mody*.

To establish a prima facie case of obviousness under 35 U.S.C. §103(a) based upon a combination of references, the cited combination of references must disclose, teach or suggest all elements/features/steps of the claim at issue. *See, e.g., In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881(C.C.P.A. 1981). All of the claimed features of independent Claims 1, 3, 10 and 12 are not taught or suggested by the combination of *Mody* and Admitted Prior Art or by either reference alone. Accordingly, the Examiner fails to establish a prima facie case of obviousness with respect to Claims 1, 3, 10 and 12. Withdrawal of the rejection is respectfully requested.

Claim 2 inherits the limitations of Claim 1 from which it depends and therefore, contains all the elements of Claim 1. Claim 2 is distinguishable from *Mody* in the same manner as Claim 1.

Since Claims 4-5 depend from and inherits all the elements of Claim 3, Claims 4-5 should be held distinguishable from *Mody* and the APA in the same manner as Claim 3.

Claims 7-9 inherit the limitations of Claim 6 from which they depend and therefore, contain all the elements of Claim 6. Claims 7-9 are distinguishable from *Mody* in the same manner as Claim 6.

Claim 11 inherits the limitations of Claim 10 from which it depends and therefore, contains all the elements of Claim 10. Claim 11 is distinguishable from *Mody* and the APA in the same manner as Claim 1.

Since Claims 13-14 depend from and inherits all the elements of Claim 12, Claims 13-14 should be held distinguishable from *Mody* and the APA in the same manner as Claim 12.

Claims 16-18 inherit the limitations of Claim 15 from which they depend and therefore, contain all the elements of Claim 15. Claims 16-18 are distinguishable from *Mody* in the same manner as Claim 15.

Accordingly, it is believed that independent Claims 1, 3, 6, 10, 12 and 15 are in condition for allowance. Without conceding the patentability *per se* of the dependent claims, they are also believed to be in condition for allowance for at least the above reasons. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections of Claims 1-18.

Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Paul J. Farrell", written in a cursive style.

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